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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,171	Applicant(s) OMURA ET AL.	
	Examiner LORI MATTISON	Art Unit 1619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 07/10/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 13-37 is/are pending in the application.
- 4a) Of the above claim(s) 13-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/03/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 2, and 13-37 are pending. Claims 2-12 are cancelled. New claims 26-37 are acknowledged. Claims 13-25 are withdrawn as an unelected species of the composition which requires a cross-linked silicone and oil. Newly submitted claims 26-37 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: They are drawn to a process of using a skin composition to reduce wrinkles. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 26-37 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.
2. Applicant's amendments to claims 1 and 2, filed 7/10/2009, are acknowledged. Claims 1 and 2 are pending and examined on the merits.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Objections and rejections not recited in this action are withdrawn.
5. References not included with this Office action can be found in a prior action.

Claim Objections

Claim 1 is objected to for improper use of the word, "polymer." The word, "polymer" is not used in a manner consistent that those of ordinary skill in the art would understand. As evidenced by Hawley's Chemical Dictionary, a polymer is a **macromolecule** formed by the chemical union of five or more identical combining units

Art Unit: 1619

called monomers. In the instant case, the instant specification teaches the sulphonated polyvinyl alcohol is a part of the **acrylic dispersion** and **not** the **acrylic polymer**. The sulphonated polyvinyl alcohol is a separate compound from the polymer. It is not a monomer which comprises the polymer. This observation is supported by the instant specification. Specifically, the instant specification teaches, "it is preferable for the water dispersion of the acrylic type polymer to contain sulphonated polyvinyl alcohol" (page 6, paragraph 14). The instant specification further teaches that, "the acrylic polymer emulsion preferably contains sulphonated polyvinyl alcohol as an emulsifier/colloid agent to obtain finely textured film" (page 32, paragraph 88). "Therefore, the water dispersion of the acrylic type polymer of the present invention should preferably contain sulphonated polyvinyl alcohol" (page 33, paragraph 91).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 2 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case line 10 of instant claim 1 recites , "...said acrylic polymer containing ethyl acrylate and sulfonated polyvinyl alcohol.." There is no support in the instant specification for an acrylic polymer which

Art Unit: 1619

comprises both ethyl acrylate and sulfonated polyvinyl alcohol monomers. Indeed, sulfonated polyvinyl alcohol is taught as an emulsifier for use in a dispersion which comprises the acrylic polymer. "... the acrylic polymer emulsion preferably contains sulfonated polyvinyl alcohol as an emulsifier/colloid agent to obtain finely textured film" (page, paragraph 88).

Claim 2 must be rejected under 35 USC 112, 1st paragraph because it depends from rejection instant claim 1.

Claim Rejections - 35 USC § 103

Claims 1 and 2 remain rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication No. 2003/0027968 (Kato, 2003), US Publication No. 2001/0003358 (Terase, 2001), US Patent No. 3959205 (Kobayashi, 1976).

Comparative Example 6 of Kato (page 12, paragraph 135, Table 7) discloses the limitations of instant claim 1. Specifically, the composition of Comparative Example 9 is disclosed to be an aqueous resin dispersion component (i.e. non-water soluble film forming polymer) which is comprises an aqueous dispersion of a polyurethane resin (page 10, paragraph 131, Table 3) and an aqueous dispersion of acrylic resin (page 9, paragraph 126). Kato teaches that the resin dispersion is applied to fastener fabric (page 10, paragraph 130). This creates a composition comprising of the fabric and the resin composition. Kato teaches that the composition of fabric and resin where formed in accordance to Example 1 (page 10, paragraph 129). Based upon the amount of resin dispersion of Example 1, and the rate in which the composition was applied to the fabric, one of ordinary skill may calculate that the amount of the fabric is 29.77 m² (page

Art Unit: 1619

10, paragraph 127). Based upon the weight of the fabric (page 10, paragraph 127), one of ordinary skill may calculate that the amount of polyurethane is 5.58% and the amount of acrylic polymer (i.e. acrylic polymer dispersion) is 5.58% of the composition of Comparative Example 9. Kato embodies the polyurethane polymer of Comparative Example 9, polyurethane (i.e. PU (6)), comprises isophorone diisocyanate and dimethylolpropanic acid and that the average particle size is 131 nm (page 11, Table 4). Kato teaches that the acrylic acid dispersion (i.e. acrylic acid polymer) most preferably comprises ethyl (meth) acrylate (i.e. ethyl acrylate (page 4, paragraph 38). Kato teaches that the average dispersion particle diameter of the acrylic resin is most preferably between 50 nm and 500 nm (page 5, paragraph 47). With regard to instant claim 1, Table 8 (page 12) of Kato teaches that Comparative Example 9 did not have the same crease whitening resistance as the Examples of the Kato's composition. Kato extends an invitation to optimize the invention by teaching that additives commonly used in the art may be added to the invention such as polyvinyl alcohol (page 6, paragraph 58). Kato teaches that the resin composition provides durability and has resistance to fiber dropout in washing and resistance to chlorine (abstract). Kato goes on to teach that that if the average particle size of the polyurethane is 20 nm or greater the manufacture of the aqueous dispersion of the polyurethane resin is easier, however it is not preferable that the size of the particle should exceed 300 nm because of the resin begins to lose its ability to resist crease whitening (page 3, paragraph 32).

Kato does not immediately embody an ethyl acrylate resin in the composition of Comparative Example 9 as set forth by instant claim 1.

Art Unit: 1619

Kato does not embody a mixture of polyurethane particles having an average size of 20-60 nm and an average size of 150-200 nm.

With regard to instant claim 1, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to have looked to Kato's teachings and utilized ethyl acrylate as one of the monomers of the acrylic aid polymer (i.e. acrylic acid dispersion) because Kato teaches that the monomers used to form the acrylic acid dispersion most preferably comprises ethyl acrylate.

With regard to instant claim 2, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to have routinely optimized the size of the polyurethane particles to an average size of 20-60 nm and 150-200 nm because Kato teaches that particle sizes larger than 20 nm are preferable for ease resin manufacturing but particle sizes over 300 nm are detrimental to crease whitening resistance of the resin. The skilled artisan would have been motivated to so in order to provide small polyurethane sizes that can more deeply penetrated between the fibrous and twill of the fabric fibers while balancing other factors such as ease of manufacturing and resistance to crease whitening.

Kato does not teach inclusion of scaly silica as set forth by instant claim 1.

Kato does not teach sulfonated polyvinyl alcohol in the acrylic polymer (i.e. acrylic polymer emulsion) as set forth by instant claim 1.

Kato does not teach that the polyurethane is a mixture of particles with an average particle size of 20-60 nm and particles having an average particle size of 150-200 nm as set forth by instant claim 2.

Kato does not teach that the polyurethane polymer has a film strength of 300-700 kg/cm², a film elongation of 200-500%, and a shrink rate of less than 20% or less as set forth by instant claim 1.

Kato does not teach that the acrylic polymer (i.e. acrylic polymer dispersion) has a film strength of 0.1-100/cm², a film elongation of 500-2000%, and a shrink rate of less than 20% or less as set forth by instant claim 1.

Terase teaches that scaly silica forms a strong coating film that has both acid and base resistance (page 1, paragraph 1).

Kobayashi teaches that polyvinyl alcohol is an alcohol used emulsion polymerization reactions. However, it is not effective for acrylic esters or methacrylic esters (column 1, lines 10-25). Instead, emulsifiers are typically used (column 1, lines 15-25). Kobayashi teaches a modified polyvinyl alcohol comprising an olefinsulfonate (i.e. sulfonated PVA) which provides stable aqueous emulsions of acrylate polymers, and methacrylic polymers (column 1, lines 30-65; column 3, lines 55-end; column 4, lines 1-15).

With regard to instant claim 1, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to have added scaly silica to the composition of Comparative example 9 of Kato in order to improve its

Art Unit: 1619

acid and base resistance since the composition of Comparative Example 9 is susceptible to chlorine bleaching agents.

With regard to instant claim 1, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to have dispersed the acrylic polymer of Kato's invention in the modified polyvinyl alcohol taught by Kobayashi because Kato's invention requires that the acrylic polymer be dispersed and Kobayashi's sulfonated polyvinyl alcohol overcomes the problem pertaining to unstable acrylate dispersions. Kato extends an invitation to optimize the invention by teaching that additives commonly used in the art may be added to the invention such as polyvinyl alcohol (page 6, paragraph 58).

With regard to instant claim 1, it would naturally flow from basic chemical structure and principles that the polyurethane polymer taught by Kato has a film strength of 300-700 kg/cm², a film elongation of 200-500%, and a shrink rate of less than 20% or less because polyurethane polymer taught by Kato comprises the same monomers of the recited claims.

With regard to instant claim 1, it would naturally flow that from basic chemical structure and principles that the acrylic polymer (i.e. acrylic polymer dispersion) taught by the combined references of Kato and Kobayashi has a film strength of 0.1-100/cm², a film elongation of 500-2000%, and a shrink rate of less than 20% or less because the composition of the combined references comprises the same reagents (i.e. ethyl acrylate and sulfonated polyvinyl alcohol).

Claims 1 and 2 remain rejected under 35 U.S.C. 103(a) as being unpatentable over French Publication No. 2,791,557 (Ramin, 2000), and newly applied US Patent No. 3,959,205 (Kobayashi, 1976), JP H11-34322 (Terase, 1999), US Patent No. 4,097,589 (Shansky, 1978) and as evidenced by 5,723,535 (Krismer, 1998).

Example 1 of Ramin teaches a nail polish which comprises 28% styrene/acrylate polymer and 1% Borchigel LW 44 (page 9, paragraph 35). As evidenced by Krismer, Borchigel LW 44 comprises hexamethylene diisocyanate (i.e. a polyurethane that is formed by reacting an isophorone diisocyanate with polyhexamethylene carbonate diol; column 3, lines 40-50; instant claim 1). Ramin teaches that the acrylics used are most preferable C1-C8 methacrylates (i.e. C2 = ethyl acrylate; page 4, paragraph 14; instant claim 1). Ramin teaches that the size of the polymers for inclusion in the dispersion are most preferably from 20 to 300 nm (i.e. the polyurethane and acrylic polymers; page 7, paragraph 21; instant claim 1). Ramin teaches that the polymer composition is an aqueous dispersion (page 7, paragraph 22). Ramin teaches that his composition may comprise anti-UV agents (page 8, paragraph 28). Ramin goes on to teach that acrylates are monomers of the vinyl film forming polymer (paragraph 14). Ramin further teaches that the polymers in an aqueous dispersion can be present in an amount effective to form a film with the content of the film being preferably 5-45% dry weight film forming polymers to the total weight of the composition (paragraph 22).

Ramin does not embody a composition comprising 1-20% of styrene/acrylate copolymer as set forth by instant claim 1.

Art Unit: 1619

With regard to instant claim 1, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to have optimized the Ramin's composition through routine experimentation to provide 1-20% acrylic type vinyl film forming polymer because Ramin teaches that the amount of the film forming polymers in the composition may vary provided that the amount is "effective" enough to form a film.

Ramin does not teach a sulfonated polyvinyl alcohol as set forth by instant claim 1.

Ramin does not teach inclusion of scaly silica as set forth by instant claim 1.

Ramin does not teach that the polyurethane mixture is a mixture of particles having an average particle size of 20-60nm and particles having an average size of 150-200 nm as set forth by instant claim 2.

Kobayashi teaches a modified polyvinyl alcohol comprising an olefin sulfonate (i.e. sulfonated PVA) which provides stable aqueous emulsions of acrylate polymers, and methacrylic polymers (column 1, lines 30-65; column 3, lines 55-end; column 4, lines 1-15).

Terase, 1999 teaches that scaly silica has outstanding ultraviolet shielding properties which make it very desirable for use in cosmetics (page 4, paragraph 14).

Shansky teaches a nail polish (title). Shansky goes on to teach that strength parameters such as the impact strength of the nail polish formulation provides the salient advantage of increasing the resistance of fingernails to splitting (column 2, lines 60-end).

Bowen teaches that Bragaw observed that impact strength of polystyrene was increased by using different particles sizes for the dispersed rubber phase (column 1, lines 50-60).

With regard to instant claim 1, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to have dispersed the styrene C1-C8 acrylic polymer of Ramin in the modified polyvinyl alcohol taught by Kobayashi because Ramin teaches that his polymers are in an aqueous dispersion and Kobayashi's sulfonated polyvinyl alcohol overcomes the problem pertaining to unstable acrylate dispersions.

With regard to instant claim 1, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to have modified Ramin's composition through inclusion of scaly silica because Ramin teaches use of anti-UV agents in his composition and Terasse teaches that scaly silica has UV-shielding properties which make it desirable for cosmetics.

With regard to instant claim 1, it would naturally flow from the basic chemical structure and chemical principles that the polyurethane polymer taught by Ramin has a film strength of 300-700 kg/cm², a film elongation of 200-500%, and a shrink rate of less than 20% or less because polyurethane polymer taught by Ramin comprises the same monomers of the recited claims.

With regard to instant claim 1, it would naturally flow that from the basic chemical structure and chemical principles that the acrylic polymer (i.e. acrylic polymer dispersion) taught by the combined references of Ramin and Kobayashi has a film

Art Unit: 1619

strength of 0.1-100/cm², a film elongation of 500-2000%, and a shrink rate of less than 20% or less because the composition of the combined references comprises the same reagents (i.e. ethyl acrylate and sulfonated polyvinyl alcohol).

With regard to instant claim 2, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to have tried to improve the impact strength of the nail polish taught by Ramin in order to improve the resistance of fingernails to splitting by using different sizes of reduced polyurethane in the dispersion. The adjustment of particular conventional working conditions (e.g. determining result effective sizes of the ingredients) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the ordinary artisan with said artisan recognizing that use of different sizes of polymers in dispersions may increase the impact strength of the nail polish formulation.

Response to Arguments

Applicant traverses the rejection of instant claim 1 under 35 USC 102(b) and 35 USC 103(a) over the Kato reference. Applicant alleges that Kato does not disclose a skin treatment for reducing wrinkles or method of using a skin treatment (Reply, page 13; last paragraph; page 15, first paragraph; page 15, paragraph 5)

Applicant's traverse has been considered but is not persuasive.

In response to applicant's argument that skin treatment for reducing wrinkles or method of using a skin treatment, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the

Art Unit: 1619

prior art structure is capable of performing the intended use, then it meets the claim limitations. In the instant case, the combined references teach the composition and its structure.

Applicant traverses the rejection of instant claim 1 under 35 USC 102(b) and 35 USC 103(a) over the Kato reference. Applicant alleges that Kato provides no disclosure that the polyurethane polymer has a film shrinkage rate of less than or equal to 20%, an acrylic polymer with a shrinkage rate of 20% or less (Reply, page 14, paragraph 1). Applicant further alleges that Kato's composition does not have the polymers with the recited properties of claim 1 (Reply, page 15, paragraph 5). Applicant alleges that the teaching of the film shrinkage rates come only from the present invention (Reply, page 14, paragraph 1).

Applicant's traverse has been considered but is not persuasive.

The film shrinkage rates of the polyurethane and acrylic polymers are a property resulting from their chemical structure, including the monomers used to build them. Kato teaches the recited polymers and their monomeric constituents. Therefore, it would naturally flow through the principles of chemistry that Kato's polymers would have the same film shrinkage rates as the instant invention.

To overcome the Kato reference, Applicant may consider whether it is appropriate to use closed claim language and proviso out the loop and fastener fabric from which the calculated percentages of the composition were derived. Applicant also

Art Unit: 1619

may wish to examine the chemical reactions/Examples used to form the polymers of the present invention to ascertain whether a non-obvious reagent was utilized which would result in a different chemical structure. The above are suggestions. Applicant is not required to comply with the suggestions. These suggestions have been proposed to overcome the Kato reference only, and other rejections made under 35 USC 103(a) may be made with other/additional prior art subsequent to such an amendment.

Applicant traverses the rejection of instant claim 1 under 35 USC 102(b) and 35 USC 103(a) over Ramin. In particular, applicant alleges that Ramin does not teach the film shrinkage rates (Reply, page 14, paragraphs 4 and 5; page 15, paragraphs 1 and 2).

Applicant's traverse has been considered but is not persuasive.

The film shrinkage rates of the polyurethane and acrylic polymers are a property resulting from their chemical structure, including the monomers used to build them. Ramin teaches the monomeric units of the recited polymers (page 9, paragraph 35; page 4, paragraph 14). Therefore, it would naturally flow through the principles of chemistry that Ramin's polymers would have the same film shrinkage rates as the instant invention.

Applicant traverses the rejection of instant claim 1 under 35 USC 103(a) over the Ramin reference. Applicant alleges that the nail polish composition disclosed by Ramin would not have the properties needed for a composition for wrinkle reduction (Reply,

Art Unit: 1619

page 16, paragraph 2). Applicant further alleges that the instant invention has a weak contractile force whereas nail polish does not (Reply, page 16, paragraph 2).

Applicant's traverse has been considered but is not persuasive.

In response to applicant's argument that Ramin's formulation is a nail polish and that of the instant invention is a wrinkle reduction composition, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim limitations. In the instant case, the structural features of the polymer are taught by Ramin.

With regard to the allegation that nail polish has a strong contractile force and the instant invention has a weak contractile force, the contractile force of the composition results from the polymers, and amounts utilized to make the composition. Ramin teaches the polymers as recited. Ramin further teaches that amounts of polyurethane and acrylate polymer to use. Therefore, it would naturally flow through the principles of chemistry that Ramin's polymers and films would have the same film shrinkage rates and contractile force as the instant invention.

Conclusion

No claims are allowed. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LORI MATTISON whose telephone number is (571)270-5866. The examiner can normally be reached on 8am-6pm (Monday-Thursday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne (Bonnie) Eyler can be reached on (571)272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1619

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/LORI MATTISON/

Examiner, Art Unit 1619

/Anne Marie Grunberg/

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